

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of

**Request by Google LLC
For Waiver of Section 15.255(c)(3)
Of the Commission's Rules**

ET Docket No. 18-70

To: Chief, Office of Engineering & Technology

REPLY COMMENTS OF FACEBOOK, INC.

Facebook, Inc. (“Facebook”) respectfully requests that the Commission further study several concerns raised by the request of Google LLC (“Google”) for waiver of Section 15.255(c)(3) of the Commission’s rules.¹ The Commission limited its authorization of mobile field disturbance sensors in the 60 GHz band to low power levels to “ensure that the mobile radars will operate at very short distances—such as using hand gestures to control a watch, a smartphone’s or tablet’s screen—which will minimize their harmful interference potential.”² Google seeks a waiver of these power level limits and asks the Commission to adopt the higher limits set by the European Telecommunications Standards Institute (ETSI) standard EN 305 550.³ However, Google’s Request for Waiver and supporting simulation study do

¹ 47 C.F.R. § 15.255(c)(3); *see* Request by Google LLC for Waiver of Section 15.255(c)(3) of the Commission’s Rules, ET Docket No. 18-70 (filed Mar. 7, 2018).

² *See In the Matter of Use of Spectrum Bands Above 24 GHz For Mobile Radio Services, et al.*, Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd. 8014, 8133, ¶ 337 (2016).

³ *See* Public Notice, Office of Engineering and Technology Seeks Comment on Google’s Request for Waiver of Section 15.255(c)(3) of the Commission’s Rules for Radars Used for Interactive Motion Sensing in the 57-64 GHz Band, Et Docket No. 18-70, DA 18-236 (rel. Mar. 12, 2018).

not demonstrate that operating Project Soli radars at the requested higher power levels would not cause harmful interference to other devices operating within the 57-64 GHz (“60 GHz”) band. In particular, the supporting study does not address the potential impact of Soli radars operating at the requested higher power level on point-to-point communications between short-range devices (“SRDs”) in the band.

First, it is probable that a Soli radar, embedded in a watch or smartphone, could be in close proximity—possibly within centimeters—of an SRD transmitter or receiver embedded in a laptop or other similar handheld device operating in the 60 GHz band. Such a small radius between Soli's radar and another co-channel SRD device(s) could lead to harmful interference resulting in degraded performance and latency. This scenario was not studied in the simulation supporting the waiver request and should be examined by the Commission. Given the high likelihood that Project Soli and SRD device(s) will be located very close together, statistical modeling of interference is unlikely to reveal the impact of Soli radars on SRD communications, and a static analysis may be more appropriate. Second, due to the proprietary aspects of Project Soli, the behavior of its coexistence mechanisms is not as well known and merits further empirical testing to substantiate the analytical model.

To ensure grant of this waiver request is indeed for “good cause” shown as required by Section 1.3 of the Commission’s rules,⁴ the Commission should fully study coexistence between Soli radars and SRDs, including the above-listed concerns before granting Google's request.

⁴ 47 C.F.R. § 1.3.

Respectfully submitted,

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